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UNITED STATES DISTRICT COURT  
DISTRICT OF OREGON  
DIVISION OF PORTLAND

PASCO SCIENTIFIC,  
Plaintiff,

v.

VERNIER SOFTWARE & TECHNOLOGY,  
LLC,

Defendant.

Case No.: 3:21-cv-01523

**REQUEST FOR ORAL ARGUMENT**

**DEFENDANT VERNIER SOFTWARE'S REPLY TO PLAINTIFF'S OPPOSITION TO  
DEFENDANT'S MOTION TO DISMISS UNDER RULE 12(B)(6)**

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## INTRODUCTION

Defendant Vernier Software & Technology LLC (“Vernier”) respectfully submits this Reply to Plaintiff PASCO Scientific’s (“PASCO”) Opposition to Defendant’s Rule 12(b)(6) Motion to Dismiss for Failure to State a Claim (“PASCO’s Opposition”).

PASCO relies on four primary arguments in favor of patent eligibility: (i) the claim identified by Vernier is not representative; (ii) the claims are directed to a different abstract idea than the one articulated in Vernier’s Motion; (iii) the claims of the Asserted Patents are more like those in *Thales Visionix* and *Diamond v. Diehr*; and (iv) the claims solve problems with conducting science experiments that are present in the prior art. PASCO also incidentally argues that there is a factual dispute that must be resolved, without providing any specifics. None of PASCO’s arguments provide the Court with any basis to deny Vernier’s Motion because the claims are nevertheless directed to an abstract idea under step one of *Alice* and they do not recite an inventive concept under step two of *Alice*. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014).

PASCO’s specific arguments are unpersuasive for the following reasons. **First**, PASCO does not identify any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim. **Second**, the alternative abstract idea identified by PASCO is still not patent eligible. **Third**, the claims of the Asserted Patents fall squarely within controlling, precedential case law of the *Electric Power Group* line of cases finding similar claims patent ineligible. And **fourth**, limiting abstract claims to a particular field does not make them less abstract.

**I. PASCO DOES NOT DISTINGUISH ANY OF ITS CLAIMS FROM THE REPRESENTATIVE CLAIM**

PASCO argues that Vernier’s proposed use of a representative claim is improper. Dkt. 23 at 17. PASCO acknowledges that it is routine for courts to focus on a single claim as representative of all claims when considering patent eligibility under 35 U.S.C. §101, but emphasizes that this is “particularly where the parties agree on the selection of a representative claim,” creating the implication that PASCO must consent to the characterization of a claim as representative. *Id.*

“Courts may treat a claim as representative in certain situations, such as if the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim *or* if the parties agree to treat a claim as representative.” *Berkheimer v. HP Inc.*, 881 F. 3d 1360, 1365 (Fed. Cir. 2018) (*emphasis added*). It is proper to analyze representative claims, as opposed to looking at each claim individually, in cases where the claims “are substantially similar and linked to the same” §101 exception. *Cleveland Clinic v. True Health Diagnostics*, 859 F. 3d 1352, 1360 (Fed. Cir. 2017) (quoting *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014)). Thus, PASCO must support its non-representative-claim contention with meaningful argument for the distinctive significance of particular claim limitations. The court may then weigh on the merits to determine whether any claim elements not found in the representative claim – such as in any dependent claims providing relevant structural elements – present a basis for a separate conclusion with respect to those claims. *Id.* at 1365-66.

PASCO mentions only three claim limitations that it considers to be “key” limitations not found in Vernier’s proposed representative claim or otherwise not discussed by its analysis. Dkt. 23 at 18. First, it is proposed that the claimed system is an “integrated wireless device.” Second, it

is proposed that the claimed system is an “integrated wireless *cart*.” Finally, it is proposed that the system is to be used “during a science experiment.” *Id.*

These claim limitations have no distinctive significance for the §101 analysis, for the reasons next discussed. Vernier’s proposed representative claim, claim 1 of the ‘173 patent, includes two of these three features, providing a physical implementation of the method of claim 15 on the generic hardware of an “integrated wireless *device*,” as well as the preamble statement of “during a science experiment.” Dkt. 20 at 9-10. PASCO does not explain why the implementation of the method by the generic hardware of an “integrated wireless *cart*” should be analyzed differently than claim 1, which recites the generic hardware of an “integrated wireless *device*.”

## **II. PASCO MISCHARACTERIZES VERNIER’S ARGUMENTS AND RESPONDS BY ALLEGING ITS CLAIMS ARE DIRECTED TO A DIFFERENT ABSTRACT IDEA**

PASCO contends that Vernier’s motion to dismiss “fundamentally miscasts” PASCO’s patents. Dkt. 23 at 6. But Vernier does not argue that the asserted patents are directed to laws of nature. Instead, Vernier argues the patents are ineligible because they are directed at an abstract idea. Dkt. 20 at 5, 13-14.

### **A. Claims Directed Toward “Teaching” Are Still Abstract**

The claims of the Asserted Patents cannot be saved from patent ineligibility by recharacterizing them as being directed to “equipment and methods of using that equipment to *teach* physics to high school and college students.” Even if this subject matter could be properly imported from the specifications of PASCO’s patents into the claims (the claims contain no express limitations related to science education), and even if something provided in the specification could be considered a new or unconventional teaching method (which is not the case), neither the Supreme Court nor Federal Circuit has upheld claims directed to a method of teaching

as being patent eligible. Instead, as described further below, this concept was criticized in concurrence by the Supreme Court in *Bilski v. Kappos*, 561 U.S. 593, 624 (2010), as analogous to a patent on “words, stories, or songs,” and has been rejected every time it has been before the Federal Circuit.

**1. PASCO’s Focus On the Educational Field Does Not Render The Claims Patent Eligible**

PASCO’s characterization of the claims as providing an improvement to the educational field is irrelevant to a §101 analysis. An abstract idea, even if it is “limited” to a particular field, is still abstract.

The only support that PASCO points to *in its claims* as to why they are directed to education is a recitation in the *preamble* of the claims that the claimed device is intended to be used “during a science experiment.” Dkt. 23 at 9. This, in turn, is implied to improve the field of science education as a whole because science educators often make science experiments; “science educators present learning material such as science experiments or laboratories with wheeled carts to teach students the [principles] of Newton’s 2nd and 3rd laws of motion.” *Id.* at 8; ‘173 Patent, 1:14-17. Even if “science experiments” and “science education” are treated as synonymous, such recitations in the preamble of the claims are generally not given any patentable weight. *See, e.g., STX, LLC v. Brine, Inc.*, 211 F. 3d 588, 591 (Fed. Cir. 2000); *Rowe v. Dror*, 112 F.3d 473, 478 (Fed.Cir.1997) (“Where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation.”). PASCO’s assertion that its device is to be used “during a science experiment” is a clear statement of purpose or intended use for the device, which is the exact circumstance in which the preamble should not be considered a claim limitation. *Id.*

The appropriate focus of a §101 analysis is the language of the claims, rather than the language of the specification. *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F. 3d 759, 766 (2019). As articulated in *Alice*, “[f]irst, we determine whether *the claims* at issue are directed to one of those patent-ineligible concepts,” and then, if the *claims* are directed to a patent ineligible concept, the court must then “examine the elements of *the claim* to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. 221 (*emphasis added*).

This means that even if PASCO had explained how the specification provides a technological solution to a technical problem in the educational field that provided clear, measurable improvement to scientific instruction, the asserted patent *claims* still provide nothing more than an abstract idea.<sup>1</sup> The idea of “teaching” or “instruction” being a patentable concept or a basis for a technical improvement has not only never been upheld by the higher courts but has been likened in Supreme Court concurrence to, variously, “a series of dance steps,” “a method of shooting a basketball,” or potentially “words, stories, or songs if framed as the steps of typing letters or uttering sounds” as one of various things that it would be “almost comical” to be patent-eligible under §101. *Bilski*, 561 U.S. at 624 (Stevens, J., concurring).

*Bilski* thus makes clear the Supreme Court’s position: a method for providing “training” would be so self-evidently abstract that it would either be a comical outcome and the basis for an

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<sup>1</sup> Even if PASCO defined further details in the specification regarding exactly how the device could be confined to the educational field – and even if confining the intended operation of the device to the educational field had any patentable significance – it would be improper to import this subject matter into the claims. “[T]he specification cannot be used to import details from the specification if those details are not claimed,” and so even if the specification is “full of technical details about a physical invention,” this “may nonetheless conclude with claims that claim nothing more than the broad law or abstract idea underlying the claims, thus preempting all use of that law or idea.” *ChargePoint*, 920 F.3d at 769. The fact that the claims do not recite any details about non-conventional methods of “teaching science” therefore compounds the problem.



*argumentum ad absurdum* (in the concurrence’s eyes) or an outcome easily foreclosed by mere reference to §101 (in the majority’s response to the concurrence). *Id.*, footnote 5.

The Federal Circuit has consistently agreed with this characterization. *See Ubisoft Entertainment SA v. Yousician Oy*, No. 19-2399 (Fed. Cir. 2020) (non-precedential) or *In re Alsabah*, No. 16-1788 (Fed. Cir. 2017) (Rule 36 affirmance). While non-precedential, these holdings indicate that the Federal Circuit has followed *Bilski* on this issue (as it is required to do). It likewise is pertinent that Vernier is not aware of any decision upholding patent claims, allegedly providing an improved method for education or instruction, under the *Alice* test.

*Ubisoft* involved an interactive game designed for learning to play guitar. The system allegedly improved upon conventional learning tools and sources for instructional information, such as “music teachers, music books, audio tapes or compact disks (CDs), and video tapes.” *Ubisoft*, No. 19-2399, at 2. Unlike the claims of the Asserted Patents (which are allegedly for the purpose of teaching), the claims of *Ubisoft*’s patent actually included elements related to improved instructional techniques and imparted new capabilities to a computer system.

This was not enough for the Federal Circuit, which concluded that providing a system for instructing a student did not amount to anything more than a process of gathering, analyzing, and displaying certain results. *Id.* at 7. The Federal Circuit gave no weight to the fact that *Ubisoft*’s claims rely on a specific device with a specific arrangement of conventional sensors (an electric guitar) which transmits data to an external computer system in a particular way. The use of such a device to provide instruction, and even the additional steps related to interpreting the sensor data and producing specific outputs (which goes well beyond any allegedly non-conventional technique for “teaching students” that is allegedly provided by PASCO’s device), represent no more than a

routine application of the underlying abstract idea that makes use of conventional and well-understood techniques. *Id.* at 8.

*In re Alsabah* involved an instructional technique for teaching Arabic to the blind. The Federal Circuit affirmed (Rule 36) the PTAB’s finding that the claims represented no more than appending conventional equipment (such as a computer, printer, software, and audio device) to the underlying abstract ideas of “synopsizing” and “teaching.” *See Ex parte Alsabah*, Appeal No. 2013-001551 (PTAB 2015), *aff’d without opinion*, No. 16-1788 (Fed. Cir. 2017), at 7. The pairing of even highly detailed instructional techniques with conventional equipment was insufficient to transform the abstract ideas into patent-eligible subject matter. *Id.* at 8.

Thus, even if the claims of the Asserted Patents are directed toward a system for providing an improvement to “teaching science,” the claims would not be patent eligible. It has long been understood that teaching or instruction is an abstract idea, and an improvement to an abstract idea itself cannot provide an inventive concept. “The abstract idea itself cannot supply the inventive concept, no matter how groundbreaking the advance.” *Trading Technologies Int’l v. IBG LLC*, 921 F.3d 1084, 1093 (Fed. Cir. 2019); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1171 (Fed. Cir. 2018).

## **2. The Hardware Recited In The Independent Claims Is Conventional**

PASCO’s focus on the alleged purpose of the invention, as opposed to whether the claims are focused on an abstract idea or inventive concept under §101, is better suited for an analysis of novelty or non-obviousness under 35 U.S.C. §102 or §103. For example, PASCO argues that the asserted claims are patent eligible because they are directed to “equipment and methods of using that equipment to *teach* physics to high school students.” Dkt. 23 at 6. According to PASCO, the claims are specifically limited to use as a teaching tool, the specification explains that the appropriate technical field is “for science education,” and the claimed invention represents an

VERNIER’S REPLY TO PASCO’S OPPOSITION TO RULE 12(b)(6) MOTION - 7

advance in how science education is performed. *Id.* But whether a problem is specifically associated with a particular “field of endeavor” is part of the obviousness inquiry under 35 U.S.C. §103, as set forth in the Supreme Court’s opinion in *KSR*, *not* the eligibility inquiry under 35 U.S.C. §101. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007).

Even if they were relevant to a §101 analysis, PASCO’s arguments highlight the conventional nature of each claimed hardware component. For instance, PASCO asserts that the Asserted Patents represent an advance in the educational field because the claimed systems offer “high accuracy and time synchronization” by eliminating “the adverse effect of wired connection to a moving cart.” Dkt. 23 at 7. In other words, their system eliminates wires.

PASCO also argues that “the asserted patents provide innovative solutions to concrete problems in science education,” all of which appear to be problems with data accuracy. One purported “improvement” over conventional systems is that the Asserted Patents use a conventional accelerometer to measure acceleration, rather than deriving the acceleration from a position sensor. Dkt. 20 at 27. Stated differently, the Asserted Patents replace one conventional sensor with another conventional sensor.

The inclusion of a gyroscope to obtain gyroscopic data is also highlighted by PASCO. *Id.*; Dkt. 23 at 9. But there is no support for the conclusion that the gyroscope is used for anything but its conventional purpose.<sup>2</sup> Finally, PASCO alleges that no external interface is needed for communications between the integrated wireless device and a computer or another wireless device. Dkt. 23 at 9. The Asserted Patents do not directly state why this is the case, but it appears to be

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<sup>2</sup> PASCO cites to the ‘173 patent, Col. 2, lines 54-55 to support the contention that this was “not previously possible using any prior art devices.” Dkt. 23 at 9. However, the cited portion of the ‘173 patent only states that “Slope is directly measured within the Cart using a gyroscope,” and does not support PASCO’s assertion that the gyroscope is unconventional or that it was not available in the prior art.

because data is transmitted using the standard (and thus conventional) Bluetooth protocol rather than requiring wired interface hardware. ‘173 Patent, 2:48-50.

PASCO’s discussion also refers to a number of other components which have been incorporated into the carts to provide additional data. For example, the asserted claims use an accelerometer to generate acceleration data, a shaft encoder to detect position changes in a shaft, and a processing device configured to decode the sensor data. Dkt. 23 at 9. In each case, the only alleged benefit is that the problems associated with the previous designs that relied upon position sensors instead of acceleration sensors to calculate acceleration are eliminated. This appears to have been motivated by a recognition that acceleration sensors are now less expensive than previously. Dkt. 20 at 27; ‘173 Patent, 2:55-57.

### **3. The Hardware Recited In The Dependent Claims Is Also Conventional**

PASCO additionally alleges that the dependent claims add additional features to the smart cart. For example, the gyroscope and the use of a radio frequency communication device (each discussed above as key elements for providing the alleged improvement) are recited in claim 3 and claim 6, respectively. Dkt. 23 at 10.

These components are conventional. An accelerometer is conventionally used to measure acceleration data, and that is how it is claimed in PASCO’s patents. Likewise, a shaft encoder is conventionally used to measure shaft rotation, and that is how it is claimed in PASCO’s patents. The claims require collecting data from two generic sensors, but do not require any non-conventional use or of the sensors of substantive analysis of the data. Dkt. 20 at 9-10. The only advantages PASCO can articulate from having additional sensors are that they collect additional data. For example, if a gyroscope is added to the cart, the cart now has the capability to collect gyroscopic data, which is then simply output by the system without further processing or analysis.

PASCO alleges that Vernier ignores the alleged advance that results from the ordered combination of elements provided in the claims of the Asserted Patents, but never explains how the ordered combination of elements achieves anything beyond the mere combination of data from different sources. Dkt. 23 at 22. None of the devices operate in combination in any manner to achieve a result that makes the cart greater than the sum of its wholly conventional parts.

In short, then, PASCO's contention that its claims are not directed to an abstract idea because they are directed to an advance in science education fails for many distinct reasons. PASCO's claimed devices do not operate as more than the sum of their conventional parts, and so no improvement is provided. Further, an advance in "teaching science" would be abstract anyway, even if the Asserted Patents provided any relevant discussion of how students could be more effectively instructed by its claimed carts, as opposed to merely mentioning "improvements" that are based on observations like the lower price of conventional, off-the-shelf accelerometers in the modern day.

PASCO thus does not adequately distinguish its claims from mere attempts to monopolize the abstract ideas previously noted by Vernier in its motion.

### **III. PASCO'S OTHER ARGUMENTS DO NOT SAVE ITS CLAIMS FROM INELEGIBILITY**

The Opposition includes lengthy discussions irrelevant to § 101.<sup>3</sup> Where it does directly address §101 issues, its arguments fail as explained below.

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<sup>3</sup> For example, PASCO devotes significant space to discussing patents not at issue and restating the subject matter of its Complaint. Dkt. 23 at 6-9. Such arguments are not relevant to the present §101 analysis and not addressed further.

**A. The Holding Of *Diehr* Is Predicated On Features Not Found In The Claims Of The Asserted Patents**

**1. Limiting Claims To A “Particular Technological Environment” Does Not Make Them Patent Eligible**

Attempting to refute Vernier’s Step One analysis, PASCO argues that the *Electric Power Group* line of cases is “off-point” because the claims of the Asserted Patents are purportedly narrowly focused to the specific circumstance of teaching science. Dkt. 23 at 7. To this end, PASCO alleges that Vernier’s characterizations of the claims ignore the idea that the system is an “integrated wireless device” that operates “during a science experiment.” *Id.* at 18. PASCO relies on *Diamond v. Diehr*, 450 U.S. 175 (1981), in an attempt to distinguish *Electric Power Group*, but fails to closely establish any correspondence between the claims in *Diehr* and the claims in the Asserted Patents. Dkt. 23 at 18-19.

The claims in *Diehr* were based on a method for molding raw, uncured rubber into cured rubber products, which made use of a mathematical relation that optimized the transformation of uncured rubber into a cured rubber products. *Id.* at 177. The mathematical relation was specifically used to govern a control system, which would constantly measure the actual temperature inside the mold, recalculate the ideal cure time, and automatically open the press when the ideal cure time equaled the actual time elapsed. *Diehr*, 450 U.S. at 178–79.

The claims in the Asserted Patents lack the details of the claims of *Diehr*. PASCO’s contention that the claims of the Asserted Patents are limited to the “particular technological environment” of science experiments does not save them from being patent ineligible because it disregards *Alice*. In particular, *Alice* noted that the *Diehr* claims solved a technological problem relating to an existing industrial process in “conventional industry practice,” and emphasized that “the claims in *Diehr* were patent eligible because they improved an existing technological process, *not because they were implemented on a computer.*” *Alice*, 573 U.S. 223 (*emphasis*

*added*). Importantly, *Alice* emphasized that any limitation of abstract ideas to “a particular technological environment,” such as a generic computing device or other generic device which merely implements the abstract idea, is *not* eligible. *Id.* (quoting *Bilski*, 561 U.S. at 611).

## **2. Implementing Claims Using Conventional Components Does Not Make Them Patent Eligible**

PASCO also argues that its claims are not abstract because they include an “integrated wireless device.” Dkt. 23 at 18. However, whether claims may be implemented on a tangible system is irrelevant. Instead, the relevant question is whether the claims function to provide more than mere instructions to the practitioner to implement the abstract idea on some device, and whether they do so by having the device perform more than “purely conventional” functions. *Id.* at 225 (quoting *Mayo Collaborative v. Prometheus Labs*, 566 U.S. 66, 79 (2012)). A Court may also consider whether the claims, as an ordered combination, clearly provide some new capability “that is not already present when the steps are considered separately.” *Id.* (quoting *Mayo*, 566 U.S. at 79).

The claims of the Asserted Patents do not require a clear, existing industrial process, let alone improve one, as the Supreme Court noted was vitally important to the *Diehr* holding. *Diehr*, 450 U.S. at 188. Instead, the claims of the Asserted Patents simply rely on conventional sensors performing conventional functions. Neither the claims nor the specification allege that any of the hardware disclosed by the Asserted Patents is used in anything but a conventional manner, and PASCO’s Opposition does not allege to the contrary.

PASCO’s accelerometer measures acceleration and then provides this acceleration data to the user in a generic fashion. PASCO’s device also has a few other sensors, which operate to provide their individual sensor outputs without ever combining any of this output into a useful ordered combination that provides any new capability. Each of PASCO’s steps can be considered

separately in order to show this; its accelerometer is measuring acceleration, its position sensor is measuring position, and so forth, and then each of these data streams is separately provided to the user. None of the details required or emphasized by the Supreme Court in either case is present in the claims of PASCO's asserted patents. For these reasons, PASCO's arguments fail, and the claims of the Asserted Patents are patent ineligible.

#### **B. PASCO'S Attempt To Distinguish *Yu* Relies On A Dissent**

Faced with a recent Federal Circuit decision that is unfavorable, PASCO relies on the *dissent* of *Yu v. Apple*, 1 F.4th 1040 (Fed. Cir. 2021). Dkt. 23 at 20-21. Vernier cites *Yu v. Apple* for the proposition that the combination of generic sensor hardware with conventional techniques to be executed by that hardware does not impart an "inventive concept." *Yu*, 1 F.4th 1040. As the claims of PASCO's Asserted Patents similarly provide little more than the combination of generic sensor hardware with conventional techniques to be executed by hardware, *Yu* is the most recent example of case law supporting Vernier's Motion.

PASCO makes two efforts to distinguish its claims from those of *Yu*, both of which fail. Most importantly, the *dissent* of *Yu* is not controlling case law. It also does not address the basis of the majority's decision, as explained by *ChargePoint. Id.* at 1044. That is, even if the specification is "full of technical details about a physical invention," the specification "may nonetheless conclude with claims that claim nothing more than the broad law or abstract idea underlying the claims, thus preempting all use of that law or idea." *ChargePoint*, 920 F. 3d 769. The *Yu* court noted that even though the patent in that case allegedly provided an improvement to the relevant technology through a highly particular arrangement of the sensors, the entire structural basis for the alleged improvement – the particular arrangement of the sensors – was not found at all in the asserted claims. *Yu*, 1 F.4th at 1042-44.



PASCO's Asserted Patents do not even rise to the level of detail included in the patents considered in *Yu*. Unlike Yu's patent, which describes a specific algorithm making use of specific software and hardware elements for providing an image enhancement (but does not properly claim it in claim 1), PASCO's Asserted Patents provide no such specific algorithm. PASCO's specification provides no algorithm for integrating any of its sensor information into a greater whole in any way.

**C. *Contour IP Is Not Binding On This Court And Does Not Support PASCO's Arguments***

The *Contour IP* ruling from California that PASCO relies on emphasizes the same point made in *Yu*: that the combination of generic sensor hardware with conventional techniques to be executed by that hardware does not impart an inventive concept. Judge Orrick readily agrees that it is well-settled that a claim's recitation of a mechanical device does not determine whether the claim is directed to an abstract idea. *Contour IP Holding, LLC v. GoPro, Inc.*, No. 3:17-cv-04738-WHO, \*14 (N.D. Cal. Sept. 13, 2021) (Order on Motion to Strike, Motion for Judgment on the Pleadings, and Claim Construction). The order notes that at the time that the patent in this California case issued, point-of-view video cameras faced a concrete functional problem: "users could not readily see and control the video while using the cameras for their intended purpose (e.g., attached to the body during movement)." *Id.*

Contour, the patent holder, thus plead that it provided an arguably inventive solution to address this concrete functional problem: first, the camera would stream a low-quality video to a smartphone so that the user could watch what was being recorded, in a manner that was removed from the camera. Second, the camera would record a high-quality video. Further, the camera would receive specified control signals from the smartphone during this streaming process so that users could control the image removed from the camera. *Id.* at \*14-15. Judge Orrick also notes that these

technical features are actually found in the claims of the patents, and so indicates that the combination of these articulated technical features and the apparently uncontested fact that these articulated technical features are reflected in the claims of the patents is sufficient to “remove[] the case from the orbit of *Yu* and related cases as a matter of pleading.” *Id.* at \*15.

The claims of the Asserted Patents contain no such similar features that remove them from the orbit of *Yu*. As has been reiterated by Vernier, the claims of the Asserted Patents do not solve a concrete functional problem through any algorithm that is anywhere near as sufficiently detailed as Contour’s system. For example, only a few of PASCO’s dependent claims refer to a separate data collection device at all, and none of the claims require a data collection device that does more than passively receive data, let alone alter how PASCO’s cart collects data in real time. *See, for example*, the ‘173 Patent, cl. 6-7, 13-14, & 20. Likewise, PASCO’s cart does not contemplate separating transmitted data into two data streams, one to be provided at a lower quality immediately to allow for such control and one to be provided at a later time. PASCO’s cart simply senses data and delivers it to another passive device, without any disclosure of *any* non-conventional algorithm by which it does so. The comparison to the *Contour IP* case in California thus would fail even if it had precedential value.

PASCO thus fails to distinguish *Yu* at all. As previously noted by Vernier, even if the claims of the Asserted Patents went further, were more narrowly drafted, and provided additional non-generic detail, such as additional detail about the synchronization steps, this would *still* not be enough for the claims of the Asserted Patents to recite an “inventive concept.” The claims of the Asserted Patents as they are *now* do not do anything at all to make the sensor output of the cart greater than the sum of its parts or otherwise provide an “inventive concept.” Dkt. 20 at 26.

**D. There Is No Correspondence Between The Claims In *Thales Visionix* and The Claims Of The Asserted Patents**

Without providing details, PASCO alleges that Vernier’s analysis of *Thales Visionix* is “made up.” Dkt. 23 at 26. Vernier previously noted that *Thales Visionix* provided further support for its position that eligible claims provide specific means for improving computer technology, or solving specific problems related to computer technology. The claims of PASCO’s Asserted Patents do neither. Dkt. 20 at 26. In *Thales Visionix*, the court emphasized that the claims protected “only the application of physics to the unconventional configuration of sensors as disclosed,” and likened the particularity of the claims to *Diehr. Thales Visionix Inc. v. US*, 850 F. 3d 1343, 1349 (Fed. Cir. 2017)

In particular, the court characterized the claims as “directed to systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame.” *Id.* at 1348-49. The court specifically emphasized that the step one inquiry, in its view, included determination of what a patent-ineligible concept recited in the claim was “directed to,” and so the use of the inertial sensors and mathematics in a non-conventional manner was pertinent to step one. *Id.* at 1349. Vernier’s argument, then, simply noted that the claims of the Asserted Patents did not do any of what the *Thales Visionix* court emphasized was important and replaced a conventional solution with another conventional one rather than using any of its sensors in a non-conventional manner. Dkt. 20 at 27.

Vernier’s analysis is not “made up;” instead, it is based on the *Thales Visionix* written opinion. The opinion notes that the conventionality or non-conventionality of a structure in a claim is pertinent to the step one inquiry. While *Thales Visionix* presented a non-conventional arrangement of sensors performing a clearly improved technique for performing a specific task

(more efficiently tracking objects on a moving platform), the claims of the Asserted Patents provide no such non-conventional arrangement. All of the sensors recited in the claims perform purely conventional operations, whether they are taken alone or in combination. As such, this reason alone makes *Thales Visionix* highly distinguishable.

PASCO's characterization of *Thales Visionix* brushes past its essential reasoning. First, PASCO alleges that the case covers inertial sensors, such as accelerometers and gyroscopes, which measure the specific forces associated with changes in a sensor's position and orientation relative to a known starting position. *Id.* Second, PASCO notes that existing sensor systems are prone to errors in the measurement of acceleration and angular velocity. *Id.* It is alleged that the claims of the Asserted Patents are indistinguishable from *Diehr*. *Id.* at 20. Finally, PASCO argues that "[l]ike the patent in *Thales Visionix*, the Asserted Patents solve the problem of "simultaneously measuring motion, force, linear acceleration and slope with high accuracy and time synchronization from within a dynamics Cart." *Id.*

The clear implication of PASCO's selective analysis is that "sensor systems" are *per se* eligible under step one on the grounds that no abstract idea is implicated. But, in *Thales Visionix*, the court reached its decision because the claims specified a particular configuration of the inertial sensors, together with a particular method of using the raw data from the sensors to more accurately calculate the position and orientation of an object on a moving platform, with the mathematical equations being used to particularly define the arrangement of the sensors. *Thales Visionix*, 850 F.3d at 1349. The highly specific arrangement of sensors is what is important; the highly specific arrangement of sensors is what gives the *Thales* claims structure.

The claims of PASCO's Asserted Patents do not have any equivalent particular arrangement of sensors with special significance, and PASCO's analysis of *Thales Visionix* does

not even attempt to argue as such. Dkt. 23 at 19-21. The only vaguely relevant limitation in all of the claims of each of PASCO's Asserted Patents appears to be a requirement that the shaft encoder is located proximate to the shaft, something which is necessary for a shaft encoder to measure changes in the shaft position and wholly conventional. *See* the '173 Patent, claims 2, 9, and 16.

As such, none of PASCO's responses to Vernier's arguments raise any question about whether the claims of the Asserted Patents are abstract or raise any question that the claims of the Asserted Patents embody some inventive concept.

#### **IV. CONCLUSION**

For the foregoing reasons, Vernier respectfully reiterates its request that the Court dismiss PASCO's Complaint for failure to state a claim upon which relief could be granted. Because leave to amend would be futile, Vernier requests dismissal with prejudice.

DATED: February 1, 2022

Respectfully submitted,

s/ Siddhesh V. Pandit

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**CERTIFICATE OF SERVICE**

I, Sid V. Pandit, hereby certify that on this day I caused to be served true and correct copies of the foregoing document on all parties appearing in this case by ECF notification, and such document is available for viewing and downloading via the ECF system.

Dated: February 1, 2022

*s/ Sid V. Pandit*

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Sid V. Pandit